

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1. – 97. (Canceled).

98. (New) Machine for producing a multilayer fibrous web, in particular a paper or board web, in which the layers formed by a respective former are couched with each other, at least two layers to be couched with each other and each having a higher content of fines on one side being fed to the relevant couching zone in such a way that they come into contact with each other with their sides having a higher content of fines, at least two of these layers being produced by a gap former in each case, which comprises two circulating endless dewatering belts, which run together, in each case forming a stock inlet as they produce an adjoining twin-wire zone and, in the region of this stock inlet charged with fibrous suspension by a headbox, are led over a forming roll, and the sheet formation of the at least two layers in each case taking place with a higher content of fines on the forming roll side, wherein, starting immediately from the forming roll, the respective twin-wire zone run downward, and in that, in the section of the respective twin-wire zone that runs downwards, in each case a forming shoe resting on the respective upper dewatering belt is provided.

99. (New) Machine according to Claim 98, wherein the belt running directions of the gap formers are opposite to each other.

100. (New) Machine according to Claim 99, wherein the layer formed in the first of the two gap formers, together with at least one of the two dewatering belts, is led around a deflection element, preferably a deflection roll, and, after that, by means of an endless belt, is fed to the relevant couching zone in a direction generally opposite to the jet direction of the first headbox, in which couching zone the layers formed by the two gap formers are couching with their sides of higher fines content together.

101. (New) Machine according to Claim 100, wherein the layer formed in the first gap former, together with the outer dewatering belt not coming into contact with the forming element, is led around the deflection element and is fed to the couching zone by means of this outer dewatering belt.

102. (New) Machine according to Claim 101, wherein both dewatering belts are led around the deflection element and, after this deflection element, the inner dewatering belt is separated from the outer dewatering belt carrying the layer with it.

103. (New) Machine according to Claim 101, wherein, after the deflection element, the outer dewatering belt of the first gap former is preferably led generally in the horizontal direction, at least as far as the region of the couching zone.

104. (New) Machine according to Claim 100, wherein a further layer is formed by a Fourdrinier former and the sheet formation of this layer is carried out with a higher contents of fines on the outer side facing away from the Fourdrinier wire, in that the layer formed in the first gap former and led over the deflection element is couched together with the layer formed by the Fourdrinier former, and in that these two layers are fed to the couching zone by means of the Fourdrinier wire, in which couching zone the layers formed by the two gap formers are couched with their sides of higher fines content together.

105. (New) Machine according to Claim 104, wherein the outer dewatering belt of the first gap former is separated from the inner dewatering belt and the relevant layer before the deflection element in the belt running direction, and the layer is only led around the deflection element together with the inner dewatering belt.

106. (New) Machine according to Claim 104, wherein the layer formed in the Fourdrinier former and the layer formed in the first gap former are couched with each other in the region of the deflection element and/or a couch roll.

107. (New) Machine according to claim 98, wherein, after the separation of the two dewatering belts of the second gap former, the layer formed by the second gap former, together with the outer dewatering belt, is fed to the couching zone, in which the two layers formed in the gap formers are couched with their sides of higher fines content together.

108. (New) Machine according to Claim 98, wherein a first of the layers to be couched with their sides of higher fines content together is formed by a Fourdrinier former and the sheet formation of this first layer is carried out with a higher content of fines on the outer side, facing away from the Fourdrinier wire, and in that further layers are each formed by a gap former and the sheet formation of these layers is carried out with a higher content of fines on the forming element side.

109. (New) Machine according to Claim 108, wherein the jet direction of the headbox assigned to the gap former corresponds generally to the running direction of the first layer formed by the Fourdrinier former.

110. (New) Machine according to Claim 108, wherein, after the separation of the two dewatering belts of the gap former, the layer formed by the gap former, together with the outer dewatering belt, is fed to the couching zone, in which the said outer dewatering belt is led together with the Fourdrinier wire in order to couch the two layers.

111. (New) Machine according to Claim 108, wherein the Fourdrinier wire is preferably led generally in the horizontal direction, at least in the region of the couching zone.

112. (New) Machine according to claim 98, wherein, in order to form an at least three-layer or four-layer fibrous web, at least one additional gap former is provided and the sheet

formation of the additional layer is carried out with a higher content of fines on the forming element side, and in that the additional layer is couched in an additional couching zone with the layer formed by the preceding gap former, at least one of the two layers being couched with the other layer with a side of higher fines content.

113. (New) Machine according to Claim 112, wherein the jet direction of the headbox assigned to the additional gap former corresponds to the running direction of the fibrous web to be formed.

114. (New) Machine according to claim 98, wherein at least one multilayer headbox and/or at least one single-layer headbox and/or a combination of different headboxes is provided.

115. (New) Machine according to claim 98, wherein at least one single-layer headbox is provided.

116. (New) Machine according to claim 98, wherein equal pressure dewatering elements are provided for belt dewatering.

117. (New) Process for producing a multilayer fibrous web, in particular a paper or board web, in which the layers formed by a respective former are couched with each other, at least two layers to be couched with each other and each having a higher content of fines on one

side being fed to the relevant couching zone in such a way that they come into contact with each other with their sides having a higher content of fines, at least two of these layers being produced by a gap former in each case, which comprises two circulating endless dewatering belts, which run together, in each case forming a stock inlet as they produce an adjoining twin-wire zone and, in the region of this stock inlet charged with fibrous suspension by a headbox, are led over a forming roll, and the sheet formation of the at least two layers in each case taking place with a higher content of fines on the forming roll side, wherein, starting immediately from the forming roll, the at least two layers are led downwards in the respective twin-wire zone, and in that, in the section of the respective twin-wire zone that runs downwards, the respective upper dewatering belt is led past resting on a forming shoe.

118. (New) Process according to Claim 117, wherein gap formers with opposite belt running directions are used.

119. (New) Process according to Claim 118, wherein the layer formed in the first of the two gap formers, together with at least one of the two dewatering belts, is led around a deflection element, preferably a deflection roll, and, after that, by means of an endless belt, is fed to the relevant couching zone in a direction generally opposite to the jet direction of the first headbox, in which couching zone the layers formed by the two gap formers are couching with their sides of higher fines content together.

120. (New) Process according to Claim 119, wherein the layer formed in the first gap

former, together with the outer dewatering belt not coming into contact with the forming element, is led around the deflection element and is fed to the couching zone by means of this outer dewatering belt.

121. (New) Process according to Claim 120, wherein both dewatering belts are led around the deflection element and, after this deflection element, the inner dewatering belt is separated from the outer dewatering belt carrying the layer with it.

122. (New) Process according to Claim 121, wherein a further layer is formed by a Fourdrinier former and the sheet formation of this layer is carried out with a higher contents of fines on the outer side facing away from the Fourdrinier wire, in that the layer formed in the first gap former and led over the deflection element is couched together with the layer formed by the Fourdrinier former, and in that these two layers are fed to the couching zone by means of the Fourdrinier wire, in which couching zone the layers formed by the two gap formers are couched with their sides of higher fines content together.

123. (New) Process according to Claim 122, wherein the outer dewatering belt of the first gap former is separated from the inner dewatering belt and the relevant layer before the deflection element in the belt running direction, and the layer is only led around the deflection element together with the inner dewatering belt.

124. (New) Process according to Claim 122, wherein the layer formed in the Fourdrinier former and the layer formed in the first gap former are couched together in the region of the deflection element and/or a couch roll.

125. (New) Process according to one of Claims 117, wherein, after the separation of the two dewatering belts of the second gap former, the layer formed by the second gap former, together with the outer dewatering belt, is fed to the couching zone, in which the two layers formed in the gap formers are couched with their sides of higher fines content together.

126. (New) Process according to Claim 117, wherein a first of the layers to be couched together with their sides of higher fines content together is formed by a Fourdrinier former and the sheet formation of this first layer is carried out with a higher content of fines on the outer side, facing away from the Fourdrinier wire, and in that further layers are each formed by a gap former and the sheet formation of these layers is carried out with a higher content of fines on the forming element side.

127. (New) Machine according to Claim 126, wherein the jet direction of the headbox assigned to the gap former is chosen so as to correspond generally to the running direction of the first layer formed by the Fourdrinier former.

128. (New) Process according to Claim 126, wherein, after separation of the two dewatering belts of the gap former, the layer formed by the gap former, together with the outer dewatering belt, is fed to the couching zone, in which the said outer dewatering belt is led together with the Fourdrinier wire in order to couch the two layers.

129. (New) Process according to Claims 117, wherein, in order to form an at least three-layer or four-layer fibrous web, at least one additional gap former is used and the sheet formation of the additional layer is carried out with a higher content of fines on the forming element side, and in that the additional layer is couched in an additional couching zone with the layer formed by the preceding gap former, at least one of the two layers being couched with the other layer with a side of higher fines content.

130. (New) Process according to Claim 129, wherein the jet direction of the headbox assigned to the additional gap former is chosen so as to correspond to the running direction of the fibrous web to be formed.

131. (New) Process according to Claims 117, wherein at least one multilayer headbox and/or at least one single-layer headbox and/or a combination of different headboxes is used.